

ABSTRACT

In a photoelectric conversion device having a plurality of pixel cells each of which includes a photoelectric conversion element, a field effect transistor having the gate area for storing signal charge generated by the photoelectric conversion element and the source-drain path for outputting a signal corresponding to the signal charge stored in the gate, a first power supply line for supplying electric power to the field effect transistor, and a first switch connected between the field effect transistor and the first power supply line, when a reset voltage for resetting the gate of the field effect transistor is V_{sig0} , a threshold voltage of the field effect transistor is V_{th} , current flowing through the field effect transistor is I_a , a voltage applied via the first power supply line is V_{cl} , and a series resistance of the first switch is R_{on} , each pixel cell is configured to satisfy a condition determined by $V_{cl} - R_{on} \times I_a > V_{sig0} - V_{th}$.